

of the columns are seen jutting out from the cliff face, which appears as though covered with tiles. But space forbids a discussion of many other interesting points which were noticed during our excursion.

Several members devoted themselves more or less to botany, and Mr. C. French, jun., who acted as botanical leader, reports that fully fifty species of plants were noticed in flower, of which the most interesting collected were *Zygophyllum billardieri*, *Dodonaea viscosa*, *Euxtaxia empetrifolia*, *Cassia eremophila*, *Acacia acinacea*, *Calycotrix tetragona*, *Eucalyptus melliodora*, *Helipterum anthemoides*, *Nicotiana suaveolens*, and *Myoporum deserti*. The ferns *Cheilanthes tenuifolia* and *Grammitis rutifolia* were also noticed growing in the interstices of the basaltic columns and among the rocks.

T. S. HALL.

## A TRIP TO THE RICHMOND RIVER DISTRICT.

BY A. CAMPBELL, JUN.

### PART II.—BUTTERFLIES AND BIRDS.

THE tropical and semi-tropical regions of the world are famed for the glory of colouring and the luxuriance of their insect and bird life. The "Big Scrub" is no exception. Of insects we find the butterflies the most attractive, while some of the birds are of wonderful plumage, and several families, besides numerous individual species, are not known in the more temperate zones. Butterflies are seen in myriads on a bright day, with gay colouring and quick flight searching in and out among the blossoms. The well-known family of *Papilio* is perhaps the best represented as far as numbers go; but the Richmond River district can claim a species peculiar to itself, *Ornithoptera richmondia*, which is a large insect, measuring from  $4\frac{1}{2}$  inches across. The male is very beautiful, with its broad markings of brilliant green and velvety-black, set off with a yellow abdomen, while the female, which is much the larger, is a sooty black, with whitish patches on the fore wing and dull gold and silver on the hinder. The genus is named from its heavy flight, which is supposed to resemble that of a bird. The female is quite a common object during the early summer months, pursuing its solitary way over the fields or feeding, with hundreds of other smaller butterflies, on some flowering scrub tree; but the male does not usually put in an appearance until late in December, when an exceptionally hot day will free them all from their chrysalids, hanging suspended among the creepers or in the branches of the trees, and on the morrow their dazzling green and black forms are seen everywhere. This is the conclusion I came to from my own experience, for on New Year's Day there was a lull in the rains and the day dawned fair;

the sun soon enveloped the place in a steaming heat, the thermometer registering  $98^{\circ}$  in the shade. Next morning two strange butterflies were reported to me in the garden; they were soon in the killing-bottle, and they were the first I had seen of the beautiful male, for previously none had been about. But shortly after, when I paid a visit to the Lantana bushes by the roadside, I was met with a sight I shall never forget. I shall simply say 18 males were captured within the first half-hour. There were few if any of the females about at the time, but I noticed that the males were in couples—wherever there was a green and black insect dodging among the flowers there was sure to be another in close attendance. They were beautiful and perfect specimens in the morning, but before the day was over all showed frayed wings to a more or less extent, for the contact with the plants and flowers soon destroys their delicate beauty. The female, however, as is the case with many other species, is more strongly built and better fitted in every way for the longer life before it.

The Lantana bushes were not the rendezvous for the Ornithopteras alone, for in fine weather countless numbers of other butterflies disported themselves among the flowers. I am not an enthusiast in butterflies, but when I found all these insects so common and so easily obtained, I very soon produced a suitable net for taking them, a piece of Lawyer Cane furnishing an excellent rim. As before mentioned, the genus *Papilio* were the most numerous. Seven species were noted. The commonest is *P. sarpedon*, with its blue-marked and black-bordered wings; then *P. lycaon* is marked similarly to the preceding species, but the colouring instead of being blue is yellowish. These two species have but the rudiments of the tails so well defined in the others. *P. macleanianus* is a very quick and energetic butterfly. Its prevailing colour is green, with a broad black edge to the wings, furnished with a row of whitish spots. *P. anactus* is black and white, with some reddish colouring on the hind wing. A butterfly much prized in collections is *P. leosthenes*, but it is somewhat rare; the ground colour is creamish, while narrow black stripes run up and down each wing, the posterior pair of which terminates in a long-pointed and very delicate tail. Another species rare in the district is *P. capaneus*, a large black insect, relieved by a narrow yellowish band on the upper wings and a broader patch on the lower, bordered on the outside with bluish and red markings; the male is somewhat smaller than the female.

The exotic butterfly, *Danaïis erippus*, is a very common object out in the fields, where in company with its smaller congener, *D. petilia*, it is seen flying about among the grass and small plants, and occasionally the rarer species, *D. hamata*, with the pretty blue-spotted wings, comes along. The family Hesperidæ, or

Skippers, is well represented. The leading member in beauty is *Euschemon rafflesia*, which is very attractive to the eye; another is about the same size, but coloured dull blue, with a sooty-black border to the wings. Two smaller brownish species frequent the long grass, and dart away with lightning-like rapidity as you disturb them from their cover. The last butterfly I shall mention is the large white and silver-coloured *Charaxes sempronius*, which I have seen busily feeding on the sweet juice oozing from damaged fruit in the orchard. Moths are equally as plentiful as butterflies, especially the Hawk Moths. I captured specimens of *Chærocampa celerio* and others hovering about the verbena flowers in the garden. The Agaristidæ are represented by three or four species, the most noticeable of which is the many-coloured *Agarista agricola*. While the Lepidoptera are so common, members of the Coleoptera, or beetle tribe, are very scarce indeed.

I shall now pass on to the birds, which are truly the life and glory of the scrub. I did not note above seventy-eight species, but the majority are true denizens of the semi-tropical growths. A few species, however, such as Magpies, Quail, &c., are essentially birds of the open field, while others are seemingly impartial, and are found usually in the second growth, or in the outskirts of the scrub itself. The Black-backed Magpie, *Gymnorhina tibicen*, and the Pied Crow-Shrike, *Strepera graculina*, are plentiful in the open country. The latter is of a retiring disposition, however, but is very noisy; a party of four or five will make the place re-echo with their wild calls. The Butcher-bird, *Cracticus destructor*, is everywhere admired as a beautiful songster, but here it is eclipsed by the Black-throated species, *C. nigrigularis*, which is, without a doubt, in its striking plumage of black and white, the handsomest of the family. The Dollar-bird, *Eurystomus australis*, and the Drongo, *Chibia bracteata*, are both very noisy birds, frequenting the outskirts of the scrub. The Laughing Jackass, *Dacelo gigas*, and the Sacred Kingfisher, *Halcyon sanctus*, are as common as in southern districts; but there is the addition here of the Forest Kingfisher, *H. macleayi*, which is a beautiful bird. It is of a bright blue colour, with the under surface white and two large white spots showing on the wings as it flies. The male is distinguished by having a band of white around its neck, but in the female the collar is not complete. A fourth species, the Azure, *Alcyon azurea*, is found along the creeks. The Forest Kingfisher selects the unique position of a white-ant's nest for its own domicile; it tunnels a hole into the side, and deposits five or six eggs in a cavity excavated in the centre. The Sacred Kingfisher, and even the Jackass, have been known to use the ants' nests similarly. On one occasion I observed a Forest Kingfisher nesting in a "calabash" or clump of Stagorns, for in the soft brown fibrous growth of rootlets it no doubt found a cosy retreat.

In another large "calabash" a Jackass had reared its young for several seasons.

The family of Superb Warblers or Wrens is represented by three species, lively little creatures, which are found wherever there is cover. But the ordinary Blue Wren, *Malurus cyaneus*, is outshone by the *M. melanocephalus*, which, instead of blue, dons a red plumage. Both species are common, but what a contrast in colouring for two birds of one family! The latter builds its nest in long grass, and the eggs, three in number, are spotted with a dull chocolate colour. A distinguishing mark to the nest is that the dry skeleton bracts enveloping the fruit of the Cape Gooseberry, which grows plentifully about, are invariably found ornamenting the exterior. One male bird of this wren I shot in the interesting stage of changing its immature brownish coat for the brilliant plumage of the adult male, which change is supposed to take place when the bird is three seasons old; then the black colouring begins to show through the drab of the head and under parts, while the red feathers appear in the back. The third species, *Malurus lamberti*, is somewhat scarce. The Grass Warbler, *Cisticola exilis*, is in great numbers, and its nest is often found in the tall weeds. The Finch, *Munia castaneithorax*, is called the "Barley-bird," for in the season it congregates and strips cereal crops. Its nest is a rough structure, usually placed in the tops of "blady" grass, which grows in patches near water. The Dicæum and the Zosterops were also noted. I saw several nests of the latter in fruit trees, and with one exception they contained two eggs each. A nest of the Dicæum was found with the unusual clutch of four eggs.

In several parts of my paper I have mentioned second growth scrub, and, of course, I refer to patches that have sprung up in the clearings, and have been allowed to stand for shade or other purposes. One bird does not, apparently, patronize any other place—the Fig-bird, *Sphecothebes maxillaris*, I refer to, which lives and breeds in several of the larger patches, never leaving them except on a foraging expedition. For its nesting-place it chooses a horizontal fork at the tip of a branch, and builds the nest of tough wiry tendrils and small sticks; the three eggs can be seen from below showing through the structure. The Fig-bird breeds in bands of a dozen or so, and several pairs of the Oriole, *Oriolus viridis*, are generally in the company.

The Pheasant Coucal, *Centropus phasianus*, is a phenomenal bird, approaching in relation nearest the Cuckoo family; but it builds a rough nest for itself in cover near the ground, and lays four dull whitish eggs. The bird frequents patches of bracken, fern, and other undergrowth, and is well known by its deep, resounding guttural call, which can be heard a great way off. It is a very awkward creature, having a long thin body, which, with the large tail, is black, while the wings are mottled brownish.

The bird possesses little wing power, and depends on its legs for safety, but if startled will hop up into a bush. It is given to paying visits to the farmers' poultry yards and demolishing the fowls' eggs. Three species of Cuckoos are noted. The Koel, *Eudynamis flindersi*, a large species, about 18 inches in length, is called the "Cooee-bird," from the nature of the male bird's whistle; but the female has quite a different call. The mature male bird is of a beautiful shining black, set off with carmine eyes. Its wearisome "coo-ee" (the second part of the call a half-tone higher than the first) is frequently heard during the night-time. The Fan-tailed, *Cacomantis flabelliformis*, and the Brush Cuckoos, *C. variolosus*, are plentiful. There is sometimes difficulty with collectors in separating these two species, but where both are common, as here, there is no trouble whatever in distinguishing their different calls; and when the birds are in hand it is noticed that the former has the tail feathers conspicuously scalloped with white on both the outer and inner webs, while with the latter only the inner webs are marked.

The Black Cockatoo, *Calyptorhynchus funereus*, and also the Banksian, *C. banksi*, are often seen flying over; the commonest parrakeet is the Crimson, *Platycercus elegans*, the well-known Rosella, *P. eximius*, being considered rare. But the district is rich in Lorikeets; the Blue-bellied, *Trichoglossus multicolor*, is very destructive to the ripening maize crops, while the Scaly-breasted, *Psittenteles chlorolepidotus*, feeds in numbers in the Bean and other flowering trees. Although I did not procure specimens of the little Red-faced Fig Parrot, *Cyclopsittacus coxeni*, yet the scrub is its home; it feeds exclusively on the fruit of the *Ficus australis*, and from its diminutive size would be very difficult to see so high up among the broad leaves.

(To be continued.)

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MAGPIES.—Some little time ago Mr. D. Best read an interesting paper before our Club on the magpie, and in it the question was raised as to the reason for magpies having developed the habit of flying at persons who happen to be in the vicinity of their nests. Mr. A. F. Thiele, of Doncaster, a member of the Club, informs me that he has taken particular notice of the habits of magpies, and says that his observations, extending over a number of years, lead him to conclude that a nest having once been robbed, the parent birds develop the habit referred to, and in support of this states that in his orchard there is a large eucalyptus tree, in which for years past a pair of magpies have regularly nested, but, owing to the height of the tree, the nests have not been molested, the birds flying quietly away if persons approach close to the tree.—C. FRENCH, JUN.